



OFFICE OF THE DEAN
SCHOOL OF ENGINEERING AND
APPLIED SCIENCE
LOS ANGELES, CALIFORNIA 90024

January 16, 1970

Professor Joshua Lederberg
Department of Biological Sciences
Stanford University
Stanford, California 94305

Dear Professor Lederberg:

I have received several copies of your article of January 10, which appeared in the Washington Post and the San Francisco Chronicle and which quotes my publication in Science. My solicitous friends believe that you misconstrued my paper, and after reading your column, I must unfortunately agree with them that you apparently missed the key points of my study. Although it is of some importance that your readers have been mislead, it is more important that so influential a commentator as yourself might be missing a constructive move toward our common objective.

In my Science paper, I made no attempt to establish or advocate social value criteria nor, as implied in your article, to advocate nuclear power based on these analyses. My principal objective was to describe as analytically as possible the historical balance between social benefit and risk in some of the applications of technology, and through this means to obtain an insight to the value criteria implicit in the trade-off which our society makes empirically in these areas. I believe if you read my paper thoroughly you will see that I have emphasized the approximate and exploratory nature of the analysis.

With specific reference to the comments in your column, you indicated that I was using the statistical fatalities associated with fossil fuel electric power as a target for nuclear power plants. As a rereading of the paper will make evident, the principal objective of that exercise was to indicate that "the economic requirement for the protection of major capital investments may often be a more demanding safety constraint than social acceptability." Further, I spent a good deal of the early discussion on the obvious fact that fatalities represented only one of the social costs and that a more complete analysis should include all forms of disabilities and other costs. Fatalities were used in this paper only for the first phase of what should be a more complete study, and this

Professor Joshua Lederberg
Stanford, California 94305

January 16, 1970
Page 2

is so stated in my article. The discussion in your column of the marginal costs of safety under personal control is not relevant to the comparison of the nuclear and fossil fuel power generation. The home use of electricity is common to both. Your discussion, however, is pertinent to the distinction between voluntary and involuntary exposures of the public--a principal point of my paper.

It has become apparent to me from the many comments I have received on the Science paper that it has stimulated both a positive interest and constructive analysis by others. I would hope that with further thought and rereading of the paper, a copy of which is enclosed, your own insights might be added to these. I believe we are both concerned with increasing not only the public awareness of the complexity of these issues, but also with establishing a much greater understanding of the important parameters involved in national decision making in such socio-technical matters. I quite agree with the statement in your column, "we dare not confide our futures to irrepressible or even tempered optimists." The same statement obviously applies equally well to pessimists. I am also convinced that we dare not confide our futures to policies drawn from the viscera rather than from the brain. I do not think it impossible to be a humanist, an intelligent analyst, and a realist at the same time.

Sincerely yours,



Chauncey Starr
Dean

CS:dg
encl.